

CLAIMS:

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1. ~~A skateboard truck comprising:~~
a swivel member adapted to be pivotally attached to the underside of the skateboard about a first skateboard pivot axis;
an axle having a pair of wheels mounted at opposite ends thereof, the axle being coupled to the swivel member by a support member secured to the midpoint of the axle; and
a resilient sleeve circumferentially disposed about the support member for providing a second skateboard pivot axis relative to the axle, the swivel and bushing being ganged together to provide pivoting of the front end of the skateboard in two degrees of freedom.
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2. The skateboard truck of claim 1, wherein the swivel member is attached to the underside of the skateboard about a base having an inclined bearing surface perpendicular to the first pivot axis.
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3. The skateboard truck of claim 2, wherein the bearing surface is inclined at an angle ranging from about 10° to about 25° relative to the skateboard's plane.
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4. The skateboard truck of claim 3, wherein the second pivot axis is inclined at an angle approximately 30° to approximately 60° relative to the skateboard's plane.
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5. The skateboard truck of claim 4, wherein the first pivot axis is inclined relative the second pivot axis at an angle ranging from about 130° to about 160°.
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6. The skateboard truck of claim 2 further comprising a
spring-loaded linkage having adjustable tension operatively
5 connected between the base and the swivel member for limiting
rotational movement of the swivel member relative to the base and
biasing the swivel member towards a position aligned with the
longitudinal axis of the skateboard.

10 7. The skateboard truck of claim 6, wherein the tension
in the linkage is adjusted by engaging a threaded portion of a
bolt that extends through a portion of the linkage and a
compression spring disposed between a portion of the linkage and
a plate, with a threaded aperture on the plate for compressing
15 the spring between the linkage and the plate to spring-load the
linkage as the bolt further engages the aperture.

8. A skateboard truck comprising:
a base attachable to the underside of a skateboard;
20 an arm carried by the base and rotatable relative to
the base about a first axis;
an axle having a pair of wheels mounted at opposite
ends thereof, the axle being carried by the arm and
rotatable relative to the arm about a second axis; and
25 a coupling operatively connected between the base and the
arm;

whereby the first and second axes provide pivoting of
the front end of the skateboard in two dimensions.

30 9. The skateboard truck of claim 8, wherein the base
comprises an inclined bearing surface perpendicular to the second
pivot axis.

5 10. The skateboard truck of claim 9, wherein the bearing surface is inclined at an angle ranging from about 10° to about 25° relative to the skateboard's plane.

10 11. The skateboard truck of claim 10, wherein the first axis is inclined at an angle approximately 30° to approximately 60° relative to the skateboard's plane.

15 C 12. The skateboard truck of claim 11, wherein the second axis is inclined relative the first pivot axis at an angle ranging from about 130° to about 160°.

20 13. The skateboard truck of claim 8, wherein the coupling is a spring-loaded linkage having adjustable tension for limiting rotational movement of the arm relative the base, and biasing the arm towards a position aligned with the longitudinal axis of the skateboard.

25 14. The skateboard truck of claim 13, wherein the tension in the linkage is adjusted by engaging a threaded portion of a bolt that extends through a portion of the linkage and a compression spring disposed between a portion of the linkage and a plate, with a threaded aperture on the plate for compressing the spring between the linkage and the plate to spring-load the linkage as the bolt further engages the aperture.

30 15. A skateboard comprising:
an elongated board;
a first truck detachably mounted to underside of the rear of the board, the first truck having a rear axle pivotally coupled to the board about a longitudinal axis;
and

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5 a second truck detachably mounted to the underside of
the front of the board wherein the second truck comprises:
a base attachable to the underside of the board;
an arm carried by the base and rotatable relative
to the base about a first axis;
an axle having a pair of wheels mounted at
opposite ends thereof, the axle being carried by the
10 arm and rotatable relative to the arm about a second
axis; and
a coupling operatively connected between the base
and the arm;
whereby the first and second axes provide
15 pivoting of the skateboard in two dimensions.

20 16. The skateboard of claim 15, wherein the base comprises
an inclined bearing surface perpendicular to the second pivot
axis.

25 17. The skateboard of claim 16, wherein the bearing surface
is inclined at an angle ranging from about 10° to about 25°
relative to the skateboard's plane.

30 18. The skateboard of claim 17, wherein the first axis is
inclined at an angle approximately 30° to approximately 60°
relative to the skateboard's plane.

35 19. The skateboard of claim 18, wherein the second axis is
inclined relative the first pivot axis at an angle ranging from
about 130° to about 160°.

20. The skateboard of claim 15, wherein the coupling is a
spring-loaded linkage having adjustable tension for limiting
rotational movement of the arm relative the base, and biasing the

arm towards a rest position aligned with the skateboard's direction of movement.

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21. The skateboard of claim 15, wherein the first truck traces a first sinusoidal path, while the second trucks traces a second sinusoidal path that weaves over the first path such that the first truck becomes a point of reference from which the second truck may pivot, causing the front nose of the skateboard to move from side-to-side about the point of reference and enabling the skateboard to turn at a variable parabolic rate.

22. The skateboard of claim 15, wherein the inclined bearing surface facilitates secondary torquing on the arm, in addition to a torque created by a rider shifting weight from side to side, enabling the rider to navigate the skateboard with increased control.

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